OBJECT ORIENTED PROGRAMMING WITH JAVA 8– LAB 8

1. Create a string with value “Software Training and Development Centre” and do the

following:

a) Display its length.

b) Check whether the string ends with “Centre” or not.

c) Extract characters from position 9 to 16.

Ans=

Code-

```
public class StringOperations
{
        public static void main(String[] args)
                {
                 String s1 = "Software Training and Development Centre";

                 int length = s1.length();
                 System.out.println("Length of the string: " + length);

                 boolean end = s1.endsWith("Centre");
                 System.out.println("Does the string end with 'Centre'? " + end);

                 String extract = s1.substring(8, 16);

                 System.out.println("Extracted substring from position 9 to 16: " + extract);
                }
}
```

Execution-

```
C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>javac StringOperations.java

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>java StringOperations
Length of the string: 40
Does the string end with 'Centre'? true
Extracted substring from position 9 to 16:  Trainin

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>
```

2. Write a program that would accept a line of text. Count the occurrence of each vowel in the text and display the count.

Ans=

Code-

```
import java.util.Scanner;

public class Vowels
        {
         public static void main(String[] args)
                {
                 Scanner v = new Scanner(System.in);

                 System.out.print("Enter a line of text: ");
                 String input = v.nextLine().toLowerCase();

                 int aCount = 0, eCount = 0, iCount = 0, oCount = 0, uCount = 0;

                for (char c : input.toCharArray())
                {

                        if (c == 'a')
                                        {
                                         aCount++;
                                        }
                        else if (c == 'e')
                                        {
                                         eCount++;
                                        }
                        else if (c == 'i')
                                        {
                                         iCount++;
                                        }
                        else if (c == 'o')
                                        {
                                         oCount++;
                                        }
                        else if (c == 'u')
                                        {
                                         uCount++;
                                        }
                }

         System.out.println("Vowel counts is:");
         System.out.println("A: " + aCount);
         System.out.println("E: " + eCount);
         System.out.println("I: " + iCount);
         System.out.println("O: " + oCount);
         System.out.println("U: " + uCount);
        }
}
```

Execution-

```
C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>javac Vowels.java

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>java Vowels
Enter a line of text: eutopia
Vowel counts is:
A: 1
E: 1
I: 1
O: 1
U: 1

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>
```

3. Write a program to display the number of words in a given sentence.

Ans=

Code-

```
import java.util.Scanner;

public class WordCount
{
        public static void main(String[] args)
        {
         Scanner w = new Scanner(System.in);

         System.out.print("Enter a sentence: ");
         String sentence = w.nextLine();

         String[] words = sentence.split(" ");

         int Count = words.length;

         System.out.println("Number of words in the sentence: " + Count);
        }
}
```

Execution-

```
C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>java WordCount
Enter a sentence: Opportunities don't happen, you create them
Number of words in the sentence: 6

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>
```

4. Accept the given text as input. Replace all occurrences of “you” by “they” and display the resultant string. “You are not happy because you are well. You are well because you are happy. You are not depressed because trouble has come, but trouble has come because you are depressed."

Ans=

Code-

```
import java.util.Scanner;

class ReplaceFunction
{
        public static void main(String[] args)
        {
         Scanner P= new Scanner(System.in);
         System.out.print("Enter a text: ");
         String input= P.nextLine();

         String replace = input.replaceAll("you","they");
         System.out.println("Statement after Raplacing: ");
         System.out.println(replace);
        }
}
```

Execution-

```
C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>java ReplaceFunction
Enter a text: You are not happy because you are well. You are well because y
ou are happy. You are not depressed beacause trouble has come, but trouble h
as come because you are depressed.
Statement after Raplacing:
You are not happy because they are well. You are well because they are happy
. You are not depressed beacause trouble has come, but trouble has come beca
use they are depressed.

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>
```

5. Write a program to arrange a given set of names in alphabetical order.

Ans=

Code-

```
import java.util.Arrays;
import java.util.Scanner;

class AlphabeticalOrders
{
        public static void main(String[] args)
        {
         Scanner scanner = new Scanner(System.in);
         System.out.println("Enter Names (comma-separated): ");

         String input = scanner.nextLine();
         String[] names = input.split(",");

         for (int i = 0; i < names.length; i++)
                {
                 names[i] = names[i].trim().toLowerCase();
                }
        Arrays.sort(names);

        System.out.println("Sorted names: ");
        for (String name : names)
                {
                 System.out.println(name);
                }
        }
}
```

Execution-

```
C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>javac AlphabeticalOrders.java


C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>java AlphabeticalOrders
Enter Names (comma-separated):
Ramesh,Suresh,Rushi,Mahesh
Sorted names:
mahesh
ramesh
rushi
suresh

C:\Users\p7pha\OneDrive\Desktop\Cdac DBDA\JAVA>
```